U.S. Department of Energy
Environmental Management Recovery Act
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Recovery Act Funds Help Portsmouth Site Reduce Contamination

PIKETON, Ohio – A $34 million American Recovery and Reinvestment Act project recently achieved a significant reduction in contaminant levels at the site of a former holding pond at the Portsmouth Gaseous Diffusion Plant in southern Ohio.

In the project launched in 2009, workers used an oxidant treatment to reduce high concentrations of trichloroethene (TCE) from a groundwater plume source area. Post-treatment sampling results showed an overall 96 percent reduction in the levels of TCE, formerly used as an industrial solvent at the site to degrease equipment.

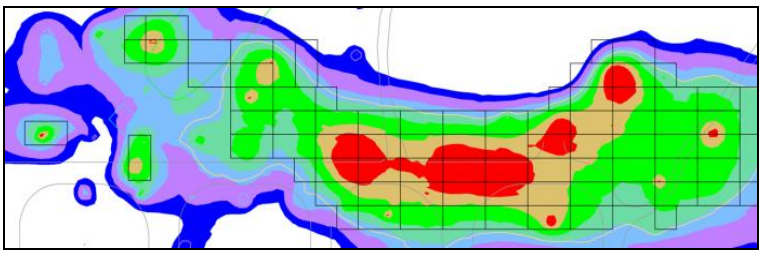
About 100 Recovery Act-funded workers completed treatment of a 42,000-square-foot area of the site ahead of schedule. Treatment of an additional 28,000-square-foot area of contaminated soils at the site is ongoing.

In the oxidant treatment, soil is excavated 30 feet below the surface to access the TCE that settled over time. Bags of sodium persulfate oxidant and catalyzed hydrogen peroxide additive are applied to the contaminated soil, which breaks down the TCE. The treated soil is then reused to backfill the excavated area.

The groundwater plume source area is located at the former X-701B Holding Pond, which had been used for neutralizing and settling waste waters from cleaning facilities.

"The funding from the American Recovery and Reinvestment Act provided the necessary resources to effectively treat this challenging contamination source area. Numerous technologies were implemented over the past 20 years, but this extensive treatment through excavation of soils to the bedrock layer has achieved remarkable reductions in the TCE levels."

– Joel Bradburne, Portsmouth Site Lead
U.S. Department of Energy



The Recovery Act-funded treatment of TCE source areas are shown here in red, tan, and green. Pre-treatment areas are outlined in the soil TCE concentration map. Red areas indicate TCE concentrations of 500 parts per million; tan, 250 parts per million; and green, 100 parts per million.

X-701B Groundwater/Soils Facts

- The former X-701B Holding Pond was used between 1954 and 1988. The pond was drained in the early 1990s.
- Several treatment technologies were used at the site over the years to address the TCE contamination, with limited success.
- Results show the initial treatment is highly effective in reducing TCE levels by more than 96 percent.

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For more information on the Portsmouth site, visit www.pppo.energy.gov. Visit www.em.doe.gov/emrecovery for more information on EM Recovery Act projects.